

**CLAIMS**

1. A high-pressure metal halide discharge lamp, characterized in that it comprises, as filling, only zinc, a halogen and a rare gas.

2. A discharge lamp as claimed in claim 1, characterized in that it comprises, as  
5 filling, only zinc, iodine and a rare gas.

3. A discharge lamp as claimed in claims 1 and 2, characterized in that the overall amount of the atomic halogen is between 1 and 30  $\mu\text{mole}/\text{cm}^3$ , the overall amount of zinc is more than 1  $\mu\text{mole}/\text{cm}^3$ , and the zinc/atomic halogen molar ratio is > 0.5.

10 4. A discharge lamp as claimed in claim 3, characterized in that the zinc/atomic halogen molar ratio is > 1.

15 5. A discharge lamp as claimed in claims 1 to 4, characterized in that the coupling-in of energy takes place without electrodes in the radio-frequency range (0.1 – 1000 MHz) or in the microwave range (> 1000 MHz).

6. A discharge lamp as claimed in claims 1 to 4, characterized in that the coupling-in of energy takes place by means of metal electrodes.

20 7. A discharge lamp as claimed in claims 1 to 6, characterized in that it additionally comprises a calcium halide, with the overall amount of calcium being at least 1 nmole/cm<sup>3</sup>.

25 8. A discharge lamp as claimed in claims 1 to 7, characterized in that the lamp tube consists of quartz, aluminum oxide, or yttrium-aluminum garnet.